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THE ROLE OF PSYCHO-EMOTIONAL FACTORS IN THE DEVELOPMENT OF CHILDHOOD OBESITY: A COMPREHENSIVE REVIEW

Abstract

Childhood obesity has become one of the most critical global health concerns of the 21st century, significantly affecting the physical, psychological, and social well-being of children. Over the last few decades, the prevalence of childhood obesity has risen dramatically, leading to a higher incidence of comorbid conditions such as metabolic syndrome, type 2 diabetes, hypertension, and cardiovascular diseases. These health risks not only contribute to the overall burden of chronic diseases but also have profound psycho-social implications. Psychological factors such as emotional stress, low self-esteem, social isolation, and emotional eating are emerging as significant determinants of childhood obesity, influencing both its onset and progression. Emotional eating, a common

coping mechanism for stress, anxiety, or depression, often leads children to consume unhealthy foods, thus further exacerbating the weight gain. Moreover, children who are obese frequently face social stigmatization, bullying, and mental health issues, all of which contribute to a vicious cycle of emotional distress and overeating. This article reviews current scientific evidence on the role of psycho-emotional factors in childhood obesity, exploring the intricate relationship between emotional eating, stress, depression, and social isolation. It emphasizes the need for comprehensive interventions that address both the psychological and physiological aspects of childhood obesity. Psychological treatments, particularly cognitive-behavioral therapy, have shown promising results in reducing emotional eating and improving mental health. However, more research is necessary to fully understand the complex interaction between these factors and develop more effective prevention and treatment strategies. The increasing recognition of the role of psycho-emotional factors in childhood obesity highlights the importance of addressing these aspects in both clinical and public health practices.

Key words: Childhood obesity, Emotional eating, Psychological factors, Stress and depression, Social stigma, Cognitive-behavioral therapy.

Problem statement

Childhood obesity is one of the most serious medical and social problems of our time, having a significant impact on the physical, psychological and social health of children [1, 2]. The spread of obesity among children is becoming a global phenomenon, with this condition being observed in various socio-economic groups and regions of the world [3, 4]. According to the WHO, childhood obesity has become one of the greatest epidemics of the 21st century, continuing to grow worldwide [5]. In Ukraine, in particular, the rate of childhood obesity has also increased significantly, which increases the risk of developing related diseases

such as metabolic syndrome, type 2 diabetes, cardiovascular disease and other chronic conditions [6].

In recent decades, considerable attention has been paid to the psycho-emotional aspects directly related to the onset and progression of childhood obesity [7]. A child's psychological state, emotional stress, self-esteem issues, and social isolation are becoming significant determinants that significantly exacerbate the negative physiological changes associated with excess weight [8]. Children with obesity often suffer from emotional overeating, which arises as a mechanism to compensate for stress, depression or anxiety, which only exacerbates the situation, contributing to further weight gain [9, 10].

The relevance of the topic is determined not only by medical but also by social consequences of childhood obesity. Obesity is a factor that affects the quality of life of children, causing them psycho-emotional difficulties, in particular, low self-esteem, social stigmatisation and depression [11]. Obese children are more likely to be bullied at school, which further worsens their emotional state. Given this complex impact, psycho-emotional factors become an important aspect in the prevention and treatment of childhood obesity, as they can be both a cause and a consequence of the development of this condition [12, 13, 14, 15].

Current research reveals the important role of psycho-emotional disorders in the development of obesity, in particular, the mechanisms of emotional overeating, the impact of stress and depression on eating behaviour, and the interaction of psychological and physiological aspects of this disease are being studied [16, 17]. The issue of the influence of psycho-emotional factors on the development of obesity in children still requires more in-depth research, as existing scientific data is often fragmentary or does not always take into account the relationship between the psycho-emotional and physiological components of the disease [18].

Analysis of recent research and publications

Neelima Agarwal explores the relationship between screen time, emotional eating behaviors, and the risk of obesity in children aged 8-12 years [19]. The study, conducted by researchers in the field of pediatrics, highlights the growing concern regarding the influence of excessive screen exposure on children's physical and psychological health. With the increasing prevalence of screen-based devices such as televisions, smartphones, and tablets, the researchers sought to investigate how prolonged screen time affects eating patterns, particularly emotional eating—defined as eating in response to emotional cues rather than physiological hunger. The study found that children who spent more than 4 hours per day on screens exhibited significantly higher emotional eating scores and a greater prevalence of overweight and obesity compared to those with less screen exposure. The data revealed a clear positive correlation between screen time, emotional eating, and body mass index, suggesting that excessive screen exposure may contribute to unhealthy eating habits and weight gain. The researchers concluded that interventions aimed at reducing screen time and promoting mindful eating could serve as effective strategies in mitigating obesity risks among school-aged children.

Wardani H.S. et al. (2024) investigates the relationship between stress and emotional eating, and their contribution to obesity in adolescents [20]. The study aimed to analyze differences in stress levels and emotional eating between obese and non-obese adolescents in Yogyakarta, Indonesia, using an observational case-control study design. The researchers selected 139 participants using multistage random sampling and measured stress levels using the Perceived Stress Scale-10 (PSS-10) and emotional eating behaviors with the Emotional Eater Questionnaire (EEQ). The study found that the majority of adolescents had high stress levels (49.6%), and a significant portion exhibited low emotional eating tendencies (43.9%). The results showed that there were significant differences in both stress levels ($p=0.004$) and emotional eating ($p=0.000$) between the obese and non-obese

adolescents. Obese adolescents had higher stress levels and were more prone to emotional eating compared to their non-obese counterparts.This study emphasizes that stress and emotional eating are important factors that contribute to obesity in adolescents. The researchers suggest that addressing stress management and promoting healthy eating behaviors could be crucial in preventing and managing obesity in this demographic.

Abby Braden et al. (2025) explores the link between emotional eating and obesity, examining dietary, psychological, and psychosocial factors [21]. The review synthesizes information regarding the association between emotional eating and BMI, dietary intake, and psychological symptoms. It describes factors underlying and maintaining EE and evaluates recent evidence supporting behavioral treatments for emotional eating in people with obesity. The review found that adults with obesity frequently report emotional eating, with emotion regulation and learning principles playing key roles in this behavior. Behavioral treatments, such as cognitive-behavioral therapy and mindfulness-based interventions, show promise in reducing emotional eating, though these effects are typically short-term. Emotional eating is linked to the consumption of high-calorie, energy-dense foods, and is influenced by psychological factors like depression, anxiety, and stress. While EE is commonly seen in adults with obesity, there is still much to learn about its mechanisms, and future research should aim to clarify causal factors and develop more effective, long-term interventions. The article also highlights the need for more targeted treatments and emphasizes the role of psychosocial factors such as emotion regulation, interoception, and stigma in contributing to emotional eating. The review concludes that emotional eating is a significant issue among individuals with obesity, particularly in women, and calls for further exploration to enhance treatment strategies for this condition.

Francesca Favieri et al. (2021) systematic review investigating the relationship between emotional regulation and overeating behaviors in children

and adolescents [22]. The authors address the significant issue of the global rise in obesity among the youth, emphasizing the psychological aspects of this phenomenon. They explore the theoretical model of emotional eating, which suggests that failure in emotional regulation could be a key factor leading to maladaptive eating behaviors, such as overeating in response to negative emotions, which contributes to weight gain. The main goal of the review was to analyze how emotional regulation and emotional intelligence influence overeating behaviors in childhood and adolescence, considering both cross-sectional and longitudinal studies. The findings indicate that emotional dysregulation is strongly linked to overeating behaviors. Many studies have shown that inadequate emotional regulation, especially during moments of stress or negative emotions, leads to increased food consumption, which can result in weight gain. The review also highlights that low emotional intelligence, such as difficulties in expressing or recognizing emotions, contributes to unhealthy eating habits like emotional overeating. Additionally, the inability to be aware of and interpret internal bodily sensations is found to be a significant factor in overeating, as those who struggle to identify their emotional states often turn to food as a coping mechanism for stress or anxiety. Overall, the authors call for further research to examine the role of other factors, such as attachment style and peer influence, in the development of maladaptive eating habits. They also emphasize the need for new interventions aimed at reducing overeating and obesity prevalence among children and adolescents by improving emotional regulation and emotional intelligence.

I Gusti Ngurah Edi Putra et al. (2025) explores the relationship between psychosocial factors and the development of overweight and obesity in children [23]. The authors used data from the UK Millennium Cohort Study, a nationally representative longitudinal study, to assess how psychosocial factors at ages 11 and 14 impact body weight changes from ages 11 to 17. The study aimed to examine whether mental health and psychosocial well-being in children, as

reported by caregivers and the children themselves, could predict the development of overweight and obesity by age 17. Two distinct psychosocial indexes were created: one based on caregiver-reported child mental health, which included internalizing and externalizing symptoms, and another based on child-reported psychosocial well-being, which involved measures such as self-esteem, life satisfaction, and experiences of peer victimization. The results indicated that worse child mental health at age 11 was significantly associated with an increased likelihood of developing overweight or obesity by age 17, as well as higher BMI z-scores. However, psychosocial well-being, as reported by children themselves, did not show such associations. Notably, the associations between child mental health and weight outcomes were more pronounced when mental health was assessed at age 11 compared to age 14. This suggests that late childhood or early adolescence may be a sensitive period during which psychosocial factors play a critical role in shaping body weight trajectories. The study also highlighted specific psychosocial factors, such as externalizing symptoms (e.g., conduct problems and hyperactivity) and experiences of peer bullying, as significant contributors to the development of overweight and obesity. These factors were independently associated with increased BMI z-scores at ages 14 and 17. Overall, the findings emphasize the importance of child mental health, particularly at age 11, in predicting the risk of developing overweight and obesity. The study suggests that addressing mental health difficulties in late childhood may help reduce the risk of obesity in adolescence.

Purpose of the Article

The purpose of the article is to summarise current scientific data on the impact of psycho-emotional factors on the development of childhood obesity. To achieve this goal, a systematic analysis of scientific literature and a review of recent publications in international scientometric databases such as Scopus, Google Scholar, Web of Science and others were conducted. Search queries

covered the following key terms in English: ‘emotional eating’, ‘psychological factors childhood obesity’, ‘stress and childhood obesity’, ‘psychosocial influences on obesity’, ‘depression and obesity in children’, ‘mental health and obesity’, ‘emotional overeating and obesity in children’, ‘self-esteem childhood obesity’, ‘childhood obesity and mental health disorders’, ‘psychological interventions childhood obesity’.

Presentation of the main material of the study

Childhood obesity is a complex medical and social problem with numerous physiological, psychological and social consequences. Psycho-emotional factors play a special role among the causes of this disease, as they directly affect children's eating behaviour, physical activity and social adaptation. Recent studies show that psycho-emotional disorders such as stress, depression, anxiety, low self-esteem, and emotional eating are important determinants of obesity in childhood [24, 25].

Emotional eating, or consuming food in response to stress or negative emotions, is one of the main causes of obesity among children. Many children resort to food as a way to cope with emotional problems such as stress, depression or anxiety [26, 27]. This eating often includes high-calorie foods such as fast food, sweets, and salty snacks, which contributes to weight gain. Emotional eating has been found to increase the risk of obesity because children begin to consume more food than their bodies need to maintain a normal metabolism [28].

Stress is another significant factor associated with the development of obesity in children. Chronic stress caused by social or family problems, as well as difficulties at school, can lead to disturbances in the regulation of eating behaviour [29, 30, 31]. Children who experience frequent stress may begin to use food as a means of comfort, leading to overeating. Furthermore, stress affects the endocrine system, which can lead to hormonal imbalances, such as increased levels of cortisol, a stress hormone that promotes fat storage [32].

Depression is another important factor that increases the risk of childhood obesity. Children who suffer from depression often have low self-esteem, which can lead to emotional overeating to compensate for feelings of loneliness or helplessness [33, 34]. Studies show that depressive symptoms in children can negatively affect their eating behaviour and physical activity levels, contributing to weight gain [35].

Low self-esteem is one of the factors that can contribute to obesity in childhood. Children who have a negative perception of their bodies or do not accept their appearance are more likely to experience psychological difficulties such as depression or anxiety, which in turn can lead to emotional eating [36, 37]. The psychological difficulties associated with obesity can be exacerbated by social isolation or bullying, which obese children often experience at school. This can lead to a cyclical effect, where social isolation contributes to increased levels of stress and depression, which in turn further stimulates emotional overeating [38].

Psycho-emotional factors have a complex relationship with the physiological processes that contribute to the development of obesity [39, 40]. For example, stress and depression can alter hormone levels, increasing cortisol, which affects metabolism and increases fat accumulation, especially in the abdominal area. Insulin resistance, which is characteristic of obese people, also has psychological consequences, as it can worsen mood and cause emotional disturbances [41, 42, 43].

One important approach to treating childhood obesity is the use of psychological interventions, particularly cognitive behavioural therapy [44]. This aims to correct emotional eating, improve self-esteem and reduce stress, which are important risk factors for obesity. Studies show that psychological interventions can significantly improve the results of obesity treatment in children, contributing to weight loss and improved emotional well-being [45, 46, 47].

Psycho-emotional factors have a significant impact on the development and progression of childhood obesity. Emotional eating, stress, depression, low self-esteem and social isolation are key factors that contribute to weight gain and worsen the overall health of children. Taking these aspects into account in the treatment of obesity is essential for achieving successful results in combating this problem.

Conclusion

Psycho-emotional factors such as stress, emotional eating, depression and low self-esteem play a key role in the development of childhood obesity. The interaction between psycho-emotional disorders and physiological processes contributes to a vicious circle, where stress and negative emotions lead to overeating, and excess weight worsens the child's emotional state. Emotional eating is the main trigger for weight gain. Psychological interventions, particularly cognitive behavioural therapy, have been shown to be effective in correcting eating behaviour and reducing stress, which has a positive effect on reducing obesity. The treatment of childhood obesity should be comprehensive, taking into account psychological, physiological and social aspects. Further research is needed to improve methods of prevention and treatment of obesity, taking into account psycho-emotional factors.

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